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PL1 LED Luminaires

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IMPORTANT INFORMATION

Warnings and Notices

When using electrical equipment, basic safety precautions should always be followed including the following:

a. **READ AND FOLLOW ALL SAFETY INSTRUCTIONS**.

b. Do not use outdoors.

c. Do not mount near gas or electric heaters.

d. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.

e. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.

f. Do not use this equipment for other than intended use.

g. Refer service to qualified personnel.

SAVE THESE INSTRUCTIONS.

WARNING: You must have access to a main circuit breaker or other power disconnect device before installing any wiring. Be sure that power is disconnected by removing fuses or turning the main circuit breaker off before installation. Installing the device with power on may expose you to dangerous voltages and damage the device. A qualified electrician must perform this installation.

WARNING: Refer to National Electrical Code® and local codes for cable specifications. Failure to use proper cable can result in damage to equipment or danger to personnel.

WARNING: This equipment is intended for installation in accordance with the National Electric Code® and local regulations. It is also intended for installation in indoor applications only. Before any electrical work is performed, disconnect power at the circuit breaker or remove the fuse to avoid shock or damage to the control. It is recommended that a qualified electrician perform this installation.

Additional Resources for DMX512

For more information on installing DMX512 control systems, the following publication is available for purchase from the United States Institute for Theatre Technology (USITT), "Recommended Practice for DMX512: A Guide for Users and Installers, 2nd edition" (ISBN: 9780955703522). USITT Contact Information:

> **USITT**
> **315 South Crouse Avenue, Suite 200**
> **Syracuse, NY 13210-1844**
> **Phone: 1.800.938.7488 or 1.315.463.6463**
> **www.usitt.org**

Philips Selecon Limited Three-Year Warranty

Philips Selecon offers a three-year limited warranty of its luminaires against defects in materials or workmanship from the date of delivery. A copy of Philips Selecon three-year limited warranty containing specific terms and conditions can be obtained from the Philips Selecon web site at www.seleconlight.com or by contacting your local Philips Selecon office.

PL1's powerful LED engine offers exceptional performance and life. Under normal operating conditions, our LED engine has a life expectancy in excess of 50,000 hours, however under worst case operating conditions with the luminaire set to continuous full output it is possible that a small percentage of LED's may require replacement sooner. The Philips Selecon three-year limited warranty includes our guarantee against premature failure of the LED engine.

TABLE OF CONTENTS

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PREFACE

1. About this Manual

The document provides installation and operation instructions for the following products:

- PL1 LED Luminaires (refer to "Product Descriptions" for individual product models).

Please read all instructions before installing or using this product. *Retain this manual for future reference.* Additional product information and descriptions may be downloaded at www.seleconlight.com

2. Product Descriptions

This manual covers the following PL1 LED Luminaire models:

PL1 LED Luminaire Spot with Local / DMX512 / IR Control (North American Market)

Part Number	Description
PL1RC01-CAN01	PL1 LED Luminaire, Spot, Canopy Mount, White
PL1RC01TLOL01	PL1 LED Luminaire, Spot, Lightolier Track Adapter fitted, White
PL1RC01TLSI01	PL1 LED Luminaire, Spot, LSI Track Adapter fitted, White
PL1RHC01	PL1 LED Luminaire, Spot, fitted with a Half Coupler, 39-inch AC Input Cable with Specified Connector (See "PL1 LED Luminaire Connectors (North American Market)" on page 4), White
PL1RC03CAN03	PL1 LED Luminaire, Spot, Remote Control, Canopy Mount, Black
PL1RC03TLOL03	PL1 LED Luminaire, Spot, Lightolier Track Adapter fitted, Black
PL1RC03TLSI03	PL1 LED Luminaire, Spot, LSI Track Adapter fitted, Black
PL1RHC03	PL1 LED Luminaire, Spot, fitted with a Half Coupler, 39-inch AC Input Cable with Specified Connector (See "PL1 LED Luminaire Connectors (North American Market)" on page 4), Black

PL1 LED Luminaire Spot with Local / DMX512 / IR Control (International Markets)

Part Number	Description
PL1RT01	PL1 LED Luminaire, Spot, Universal 3 Circuit Track Adapter, White
PL1RT03	PL1 LED Luminaire, Spot, Universal 3 Circuit Track Adapter, Black
PL1RC01	PL1 LED Luminaire, Spot, Ceiling Rose, White
PL1RC03	PL1 LED Luminaire, Spot, Ceiling Rose, Black
PL1RHC01	PL1 LED Luminaire, Spot, fitted with Half Coupler, 1 meter AC Input Cable, White
PL1RHC03	PL1 LED Luminaire, Spot, fitted with Half Coupler, 1 meter AC Input Cable, Black

Notes:

(1) All PL1 LED Luminaires are universal voltage.

(2) Product accessories can be found in "ACCESSORIES" on page 4.

3. ACCESSORIES

Contact your Authorized Philips Selecon Dealer for price and availability of all accessories for PL1 LED Luminaires. Additional information can be found on the Philips Selecon web site at www.seleconlight.com.

PL1 LED Luminaire IR Remote

Part Number	Description
PL1IRR	PL1 LED Luminaire Handheld IR Preset Programmer

PL1 LED Luminaire Barndoors & Filter Holders

Part Number	Description
PL1CF	PL1 LED Luminaire Color Filter Holder
PL1BD0103	PL1 LED Luminaire Barndoor, White Exterior, Black Interior
PL1BD03	PL1 LED Luminaire Barndoor, Black Exterior, Black Interior

PL1 LED Luminaire DMX512 Cables

Part Number	Description
PL1DMXFRJ45	PL1 LED Luminaire DMX512 Cable - XLR-5 Female to RJ 45, 12 inches (305 mm), White
PL1DMXFRJ46	PL1 LED Luminaire DMX512 Cable - XLR-5 Female to RJ 45, 12 inches (305 mm), Black
PL1DMXMRJ47	PL1 LED Luminaire DMX512 Cable - XLR-5 Male to RJ 45, 12 inches (305 mm), White
PL1DMXMRJ48	PL1 LED Luminaire DMX512 Cable - XLR-5 Male to RJ 45, 12 inches (305 mm), Black

PL1 LED Luminaire Tools

Part Number	Description
ARLAKTOOL	Allen Wrench Hand Tool with 2.5 mm, 3.0 mm, 4 mm, and 5 mm Hey Keys

PL1 LED Luminaire Connectors (North American Market)

Part Number	Description
GR	15A NEMA 5-15P Male Edison Connector
GP	20A, Male Stage Pin Connector
GTL	20A, NEMA L5-20P Male Twist-Lock Connector

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PL1 LED LUMINAIRE OVERVIEW

1.   PL1 LED Luminaire Components

Luminaire Components
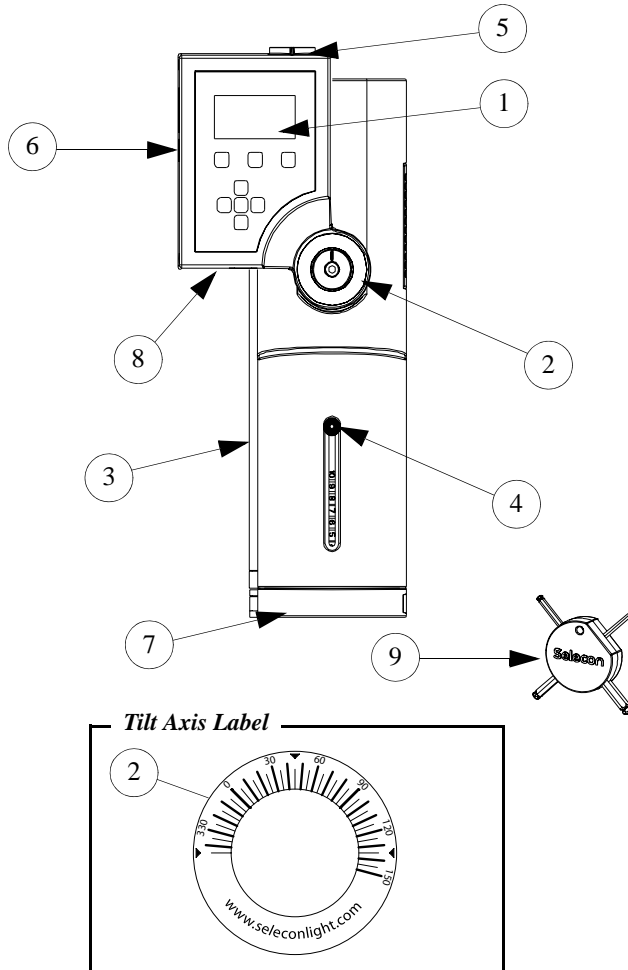
1) LCD Display Menu (see "LCD Display / Menu" on page 5 for more information)
2) Tilt Axis Point (see detail)
3) Lens Barrel
4) Locking Focus / Zoom Knob
5) Mounting Point
6) DMX512 In/Out Connections - both ports are In / Out (see detail)
7) Diffuser / Accessory Holder
8) IR Programming window
9) Allen Wrench Tool (part number ARLAKTOOL, included with luminaire) contains 2.5mm, 3mm, 4mm & 5mm Allen hex keys for locking pan or tilt.

Tilt Axis Label

DMX512 In / Out Connections

Note:
Some components not shown for clarity.
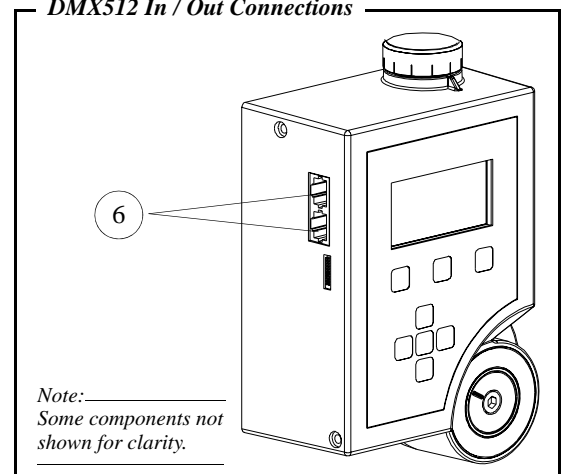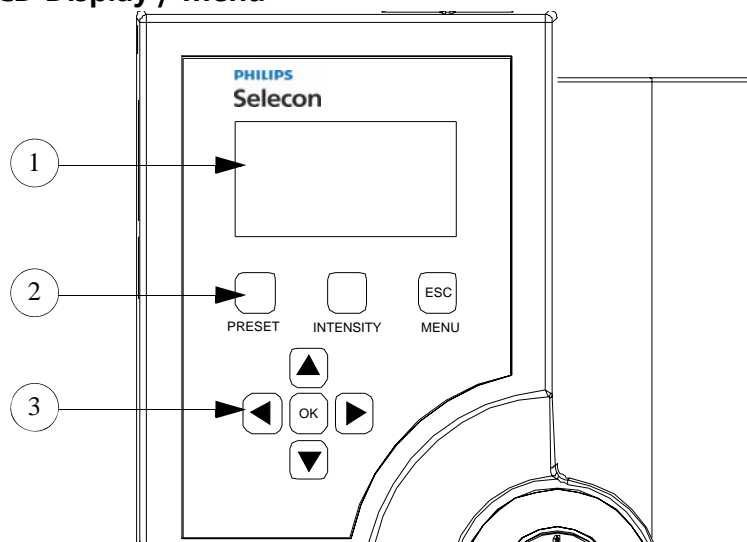
LCD Display / Menu

1) LCD Display (Menu System)
2) Preset / Intensity / Menu Access Buttons
3) Function (Menu System) Select Push Buttons

Note: For Menu operation and programming details, refer to "LCD Menu Operation" on page 10.

PRESET   INTENSITY   ESC MENU

INSTALLATION AND SET UP

1.   Power Requirements

The PL1 LED Luminaire operates on 120 to 240 volts AC (+/- 10%, auto-ranging). The luminaire contains an auto-ranging power supply. Depending on supply voltage, each luminaire can draw up to 1.91 amps.

Table 1: PL1 LED Luminaire Voltage vs. Current

Voltage (AC)	Total Current (A)
90	1.91
100	1.72
110	1.56
120	1.43
130	1.32
140	1.23
150	1.15
160	1.07
170	1.01
180	0.96
190	0.91
200	0.86
210	0.82
220	0.78
230	0.75
240	0.72

2.   Connecting Power

If the unit is supplied with an AC input cable, Table 2 describes how to connect power to your PL1 LED Luminaire . Field wiring of the PL1 LED Luminaire is straight forward. A total of 3 wires/conductors need to be brought to the unit. The following wiring scheme is required:

Table 2: PL1 LED Luminaire AC Input Connections

Wire Color	Purpose
Brown	Main / Line (120 to 240VAC)
Blue	Neutral
Green/Yellow	Ground

3.   Connecting to the DMX512 Network

Basic DMX512 installation consists of connecting multiple PL1 LED Luminaires together (up to 30 luminaires) in "daisy-chain" fashion. A cable runs from the control console (or DMX512 control source) to the DMX connector on the first PL1 LED Luminaire. Another cable runs from the other DMX connector on the first unit to a DMX connector on the next PL1 LED Luminaire (or DMX512 device to be controlled).

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Note: For more information on DMX512 networking and systems, refer to "Additional Resources for DMX512" on page 1. For PL1 LED Luminaire DMX Mapping, refer to "DMX CONTROL" on page 18.

See DMX512
Cable Options Below

DMX512

(from console or
control device)

DMX512 *(out from first*
to second luminaire)

DMX512 *(out to the next luminaire or*
DMX512 controlled device)
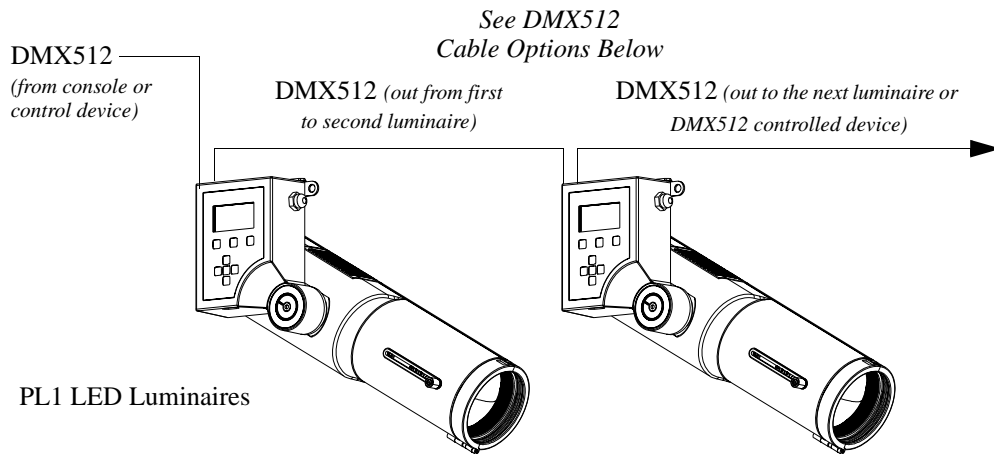
PL1 LED Luminaires

DMX512 Cable Options

PL1 LED Luminaire DMX Cables (DMX to RJ45)
Sold Separately

To Luminaire (RJ45)   *DMX512 (XLR) Male*

To Luminaire (RJ45)   *DMX512 (XLR) Female*

DMX512 Connections		
DMX512 Signal	**XLR Pin**	**RJ45 Pin**
Common (Drain)	1	7
DMX512 -	2	2
DMX512 +	3	1
Note: Remaining pins on each connector are not used.		

Note: For cables required to operate and control PL1 LED Luminaires via DMX512, see "PL1 LED Luminaire DMX512 Cables" on page 4.

4. Mounting

There are several ways to mount PL1 LED Luminaires (depending on mounting option purchased). Below are the various mounting options from Philips Selecon. Refer to "Product Descriptions" on page 3 for additional information.

Note: For track mounted luminaires, refer to the track manufacturer's requirements and instructions for installation procedures. For ceiling mounted models, you must follow local and national codes for fixture installation.

⚠️ **WARNING!** Before attempting any installation or service, disconnect all power at power source. Turning off the luminaire does not disconnect power. Installation and service should only be performed by a trained and qualified professional. Be sure to check circuit capacity before installing luminaires.

PL1 LED Luminaire - Track Mounted Models

North American
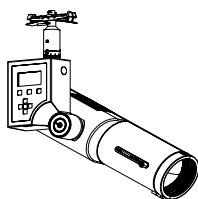
PL1 LED
Luminaire with
Lightolier Track
Mount
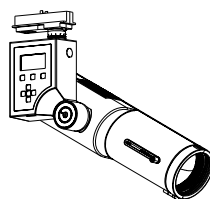
PL1 LED
Luminaire with
LSI Track Mount

International
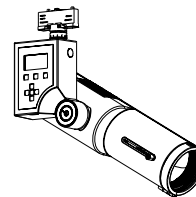
PL1 LED Luminaire with
Universal (EUTRAC) Three
Circuit Track Mount Adapter

PL1 LED Luminaire - Ceiling Mounted Models

North American
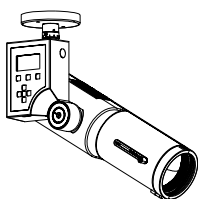
PL1 LED Luminaire with
Canopy Mount

Detail of power connection block in ceiling-mounted models. For wire codes, see "Connecting Power" on page 6.
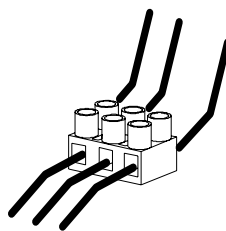
International
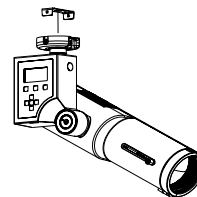
PL1 LED Luminaire
with Ceiling Rose Mount

⚠️ **WARNING!** All PL1 LED Luminaires must be mounted - vertically - as shown above to allow proper cooling. Luminaire head may be positioned as desired.

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PL1 LED Luminaire - With AC Input Cable and Half-Coupler Mount

North American / International

Half-Coupler Mount
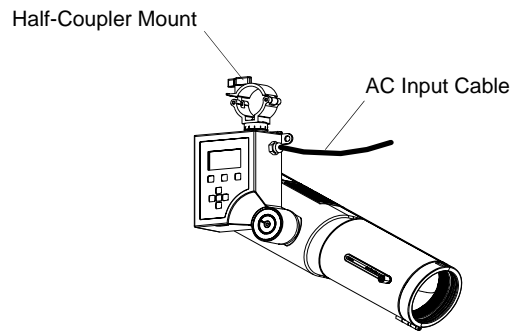
AC Input Cable

PL1 LED Luminaire Shown with
Half-Coupler Mount*

Note: *Models with Half-Coupler mounting hardware includes a 39-inch (1 meter) AC input cable.

WARNING! All PL1 LED Luminaires must be mounted - vertically - as shown above to allow proper cooling. Luminaire head may be positioned as desired.

5.   Pan & Tilt Adjustments

To adjust pan and/or tilt:

Step 1.   At either pan or tilt, locate Allen head screw as illustrated in **Figure 1**.

Step 2.   Using supplied Allen Wrench Tool (part number ARLAKTOOL), loosen, but do not remove, retaining screw.

Step 3.   Position / adjust pan (left or right) and/or tilt (up or down) as desired.

Step 4.   Hand-tighten, but do not over tighten, retaining screw.

Pan Retaining Screw

Note: Mount not shown for clarity.

Tilt Retaining Screw

Allen Wrench Tool
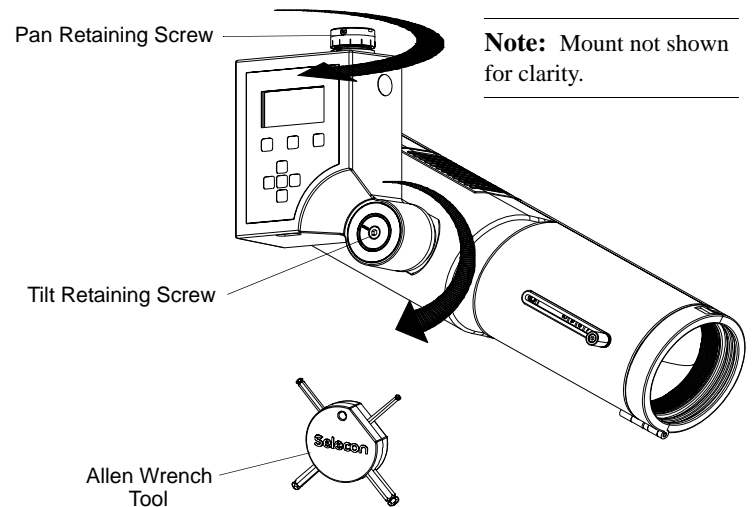
Figure 1: PL1 Luminaire Pan & Tilt Adjustment

OPERATION AND PROGRAMMING

1. LCD Menu Operation

The PL1 LED Luminaire's LCD Display and Menu System provides local control for accessing all the fixture's status information, menu options, and settings.

Note: If there are multiple luminaires in a system, changes would need to be made at each LCD Menu as desired.

Upon power up, the LCD will display the main screen showing the product type/name. If DMX is enabled, the programmed address will appear after power up.

Escape Button -
Enters menu options. Navigates
(backs up) one menu level.

LCD Display -
Displays all menu parameters and
option settings. Also displays DMX512
address (DMX models only).

INTENSITY Button -
Allows the customization of current
intensity (light output). Note, using
the LEFT and RIGHT arrow buttons
you can select each RGBW
channel individually and change
their intensity using the UP and
DOWN arrows.

PRESET Button -
Allows the recall of stored presets.

Up/Down/Left/Right Arrow Buttons -
Navigates menu system and used for
selecting and setting options.

OK (Enter) Button -
Accesses details, activates
a field, or enters a setting
depending on the current menu item.

Figure 2: LCD Display and Menu System

2. LCD Menu System

The LCD Display Menu system consists of several categories. Use the four arrow buttons as required (refer to **Figure 2 on page 10**) to access and make changes to the menu items. When the desired menu item is reached, press [OK] to display the menu options. Use navigation and [OK] buttons to view status and configure the LCD Menu as required.

Note: Depending on the security settings, certain menu items may be password protected. You must have the set PassPIN in order to access these items. Locked items will have a "Key" icon displayed next to them.

To navigate and access menu settings/selections:

Step 1. At Main Menu, press [ESC] / [MENU] button once. A small window will appear over Main Menu with sub-menu categories:

      a. Save as Preset

      b. Edit a Preset

      c. Color Mix

      d. Fan Control

      e. Settings

      f. Lock Fixture

      g. Enter Password

      h. LED Status

Step 2. Press [OK] at desired menu item to access and make changes.

Step 3. Make changes as desired.

Note: When DMX512 signal is present, Edit Preset and Color Mix options will not appear in menu structure.

To navigate fixture status menus:

Step 1. At Main Menu, press LEFT or RIGHT arrow button once. Main menu screen will change to fixture status screen will appear as follows (note, depending on which arrow button is pressed, status screens may appear in reverse order):

      a. DMX Address (note, if fixture is UNLOCKED, hit [OK] to change DMX address)

      b. Fixture Hours (displays fixture operating hours since last reset)

      c. Fixture Power (displays Max Power Limit setting (in watts), Present Power consumed by fixture (in watts), and Hours of Use)

      d. Fixture Status (displays current operational temperature, LED status, and fan speed setting)

Step 2. Press LEFT or RIGHT arrow buttons to scroll through status screens.

Menu Structure

MAIN MENU

Save as Preset

Sub Menu	Options	Comments
Select Preset to Save - *(Option)* *Scrolls and sets current user-defined color mix to various recallable presets in the fixture using arrow buttons.* *Note: To edit a current (set) preset, see Edit Presets.*	Off	Users can: • Save the current settings (look) to a specific recallable Preset in the fixture's memory. • Edit the levels (values) for Red, Green, Blue, White, and Intensity values (in percent%) by using the arrow buttons. Once the values are adjusted, the preset is saved as desired. *Only intensities may be stored on White Color Temperature presets. RGBW in these presets cannot be edited or changed.
	Scratch Pad	
	Warm White*	
	Cool White*	
	Day Light*	
	Preset X (5 through 31)	

Continued next page

Note: See to learn how to access menus. To save changes, hit [OK]. Press [ESC] to cancel any changes you made.

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Menu Structure (continued)

Continued from previous page

Edit a Preset

Sub Menu	Options	Comments
Select Preset to Edit - *(Option)* *Selects a current preset and outputs the preset, so preset can be edited.* *Note: To save a specific look of the fixture, see Save Presets.*	Off	Users can: • Edit the current settings (look) to a specific recallable Preset in the fixture's memory. • Edit the values for Red, Green, Blue, White, and Intensity values (in percent%) by using the arrow buttons. • Once the values are adjusted, the "Save Preset" menu option appears to save the edits. NOTES: *Only intensities may be stored on White Color Temperature presets. RGBW in these presets cannot be edited or changed. **If a Calibrated Preset's Color Mix is changed (5 thru 25), an asterisk '*' is appended to the end of the name to indicate that it has been modified. This only happens if the name matches the original calibrated name, stored in EEPROM. This does not happen if the Intensity is changed, only the color mix.
	Scratch Pad	
	Warm White*	
	Cool White*	
	Day Light*	
	Preset X (5 through 31)**	
Note: When DMX512 signal is present, Edit a Preset option will not appear in menu structure.		

Color Mix

Sub Menu	Options	Comments
Select Color or Intensity to Adjust - *(Option)*	Red	Users can: • Edit Red, Green, Blue, White, and Intensity values (in percent%) by using the arrow buttons. • Once the values are adjusted, press [OK] to save the edits.
	Green	
	Blue	
	White	
	Intensity	
Note: When DMX512 signal is present, Color Mix option will not appear in menu structure.		

Fan Control

Sub Menu	Options	Comments
Select and Set Fan Speed - *(Option)* *Note, hit Cancel to cancel any changes you made.*	Max	Highlight "Max" button and hit [OK] button on menu. Sets the maximum speed of the fan.
	Level	Level sets the fan to a constant speed (will not vary). Adjust level (on fan speed level bar) using Left and Right arrow buttons, highlight "Level" button in menu, and hit [OK] on menu to use user-defined level.

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Menu Structure (continued)

Continued from previous page

Settings

Sub Menu	Options	Comments
SETTINGS - *(Option)* *Scrolls and sets the various fixture settings using arrow buttons.*	See "Settings" on page 16 for details.	

Lock Fixture

Sub Menu	Options	Comments
LOCK - Are you sure?	Yes (to Lock Fixture) / No	Use arrow buttons to make selection. Press [OK] to accept. Note, a password must be established (set) in order to lock a fixture. Locking the fixture will disable access to changing menu settings.

Enter Password

Sub Menu	Options	Comments
Enter Pass PIN	Enter four-digit password	For details, refer to "Security" on page 14.

LED Status

Sub Menu	Options	Comments
LED Status Information *Scrolls through the various levels using arrow buttons as indicated on menu screen. Depending on the arrow button pressed, the screens may appear in a different order that shown in "Options".*	LED 1	Displays LED's current status (in percentage%) of Intensity, Red, Green, Blue, and White elements of the LED). Also displays current color temperature (i.e., WARM WHITE), Fan Speed, operational LED junction temperature, power settings.
	Levels	Displays DMX levels for each LED element (Red, Green, Blue, and White) and total power.

3. Security

Unwanted changes to the Fixture's Configuration or Setting can be controlled by setting a security level, or Locking the Fixture. Three levels of security are available in addition to completely Locking the Fixture.

PL1 luminaires are shipped with default passwords. Users may set their own password (four-digit number). When setting a password, write it down and keep it in a secure location. Note, Philips Selecon does not have records of passwords established by users or owners.

Note: Contact Philips Selecon technical support if a unit is locked and the password is lost for instructions on how to reset luminaire.

Note: If the Fixture is locked when it is powered down the fixture will remain in the locked state when powered up.

Passwords

Establishing or Changing Passwords

Step 1. At a Status Screen, press [MENU] and scroll to "Settings", press [OK].

Step 2. Go to the Security section.

Step 3. Select a Level to change (Level 1 PIN / Level 2 PIN / Level 3 PIN).

Step 4. Press [OK] to edit using the [UP ARROW], [DOWN ARROW], [LEFT ARROW] or [RIGHT ARROW] keys to enter a four-digit password (using 0 to 9).

Step 5. Press [OK] to save changes. If you hit [ESC] (Escape) password will not be stored and process must be repeated.

Step 6. Password is set.

Note: The current security level is displayed next to the Security heading. Only Passwords at, or below, that level will be displayed for modification. The level can be changed by entering a higher level Password on the "Enter PassPIN line directly below the Security heading, like Step 4 above.

Security Levels

Security Level	Description	Default PassPIN
0	System is locked; the only key that is active is the Menu/ESC Key. When this key is pressed a PassPIN is requested.	Not Applicable
1	All keys are Active. You can select any Preset, and change Intensity, set DMX Address.	1111
2	Editing and Saving of Presets is added to Level 1 functionality.	2222
3	Operationally the same as level 2, however all settings are available on the Settings screen.	3333

Locking Fixture

To lock the fixture:

Step 1. At a Status Screen, press [MENU] and scroll to "Lock Fixture".

Step 2. Press [OK].

Step 3. Use [LEFT ARROW] or [RIGHT ARROW] keys to highlight "YES" ", press [OK].

Step 4. Fixture is now locked.

Note: When the Fixture is Locked only the [ESC]/[MENU] key is functional. Pressing this key will display a request for a password. When a valid password is entered the fixture is unlocked to the security level of the entered password.

4. Presets

Presets are Color Mixes that are stored in the Fixture, they can be recalled to reproduce a specific output from the fixture. Presets are made up of a Color Mix; Red, Green, Blue, and White. They also have Intensity associated with them.

Presets can be recalled via the User interface or by a DMX channel, when under DMX control. The Preset's Intensity is applied if the User Interface is used; if DMX, the DMX Intensity channel is used for Intensity.

Presets Types

Presets are classified as Locked, Protected, or User. The type of preset determines what aspects of the Preset can be modified.

Locked

Locked Presets are factory Calibrated, and their Color Mix cannot be changed by the user. Their Intensity can be changed. Three Presets (2-4), "Warm White', "Cool White", and "Day Light", are Locked.

Preset 0, the "off" preset is also Locked to the OFF value.

Protected

Protected Presets are also Factory Calibrated, and by default are Protected from changes to their Color Mix. Their Intensity can be changed. Protected Presets are Presets 5-25. They can be Un-Protected by setting "Protected" to "No"; see section on Settings. If Un-Protected these presets function like User Presets.

The Factory Calibrated values for the protected presets can be re-loaded to the original factory calibration settings by setting "Load Factory" to "Yes" "; see section on Settings.

User

User Presets can have their Color Mix and Intensity changed without restriction.

Note: If the Color Mix of a Factory Calibrated Preset is changed, by turning protection Off, an '*' is appended to the end of the Preset's Name to indicate that the Calibrated values have been changed.

Editing Preset Names

On the Edit Preset screen, the option is available to edit the name of a preset, via Screen button. However, the names of Presets 0-4 cannot be edited.

Use the [LEFT ARROW] and [RIGHT ARROW] keys to select the character to be changed and use the [UP ARROW] and [DOWN ARROW] keys to change that character. The Character Scroll order is A-Z, space, 0-9. If you are scrolling up the Alpha character displays as Upper Case; if you are scrolling down the Alpha character displays as Lower Case. Stop on the character you want, ignoring case, then press the opposite [UP ARROW] or [DOWN ARROW] key if you want to change the case. [OK] to save changes, [ESC] to cancel changes.

5. Settings

The following Parameters can be changed on the Settings Screen.

The first column "Security Level" is the minimum security level you have to be at before the line is displayed for editing in the Settings screen.

To edit a value on the Setting Screen, use the [UP ARROW] or [DOWN ARROW] keys to move the highlight to the settings value you wish to change. Press [OK] to begin editing that value. Use the [UP ARROW], [DOWN ARROW], [LEFT ARROW] or [RIGHT ARROW] keys to make changes to the value. Press [OK] when complete to save changes, or [ESC] to cancel changes to that value.

When done making changes on the Settings Screen press [ESC] to re-boot fixture and implement changes. Fixture will not re-boot if nothing was changed.

Security Level	Parameter	Values	Default	Description
Security				
1	Enter PassPIN	4-Digits (0 to 9)	****	There are 4 levels of security, this allows you to change the level while in the Settings Screen.
3	Level 1 PIN	4-Digits (0 to 9)	1111	Sets Level 1 PassPIN
3	Level 2 PIN	4-Digits (0 to 9)	2222	Sets Level 2 PassPIN
3	Level 3 PIN	4-Digits (0 to 9)	3333	Sets Level 3 PassPIN
3	Power-Up	1 - 3 or Locked	3	Security Level after Power-Up, if not Locked (Level 0)

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General

1	Power Limit	30W, 40W, 50W, 70W, 90W, 100W, 120W	120W	Sets the maximum power setting of the LED engine.
1	Power-Up	Off, Scratch Pad, Warm White, Cool White, Day Light, Preset30, Preset31, Last Set	Cool White	When the Fixture Powers-Up what does it output. Scratch Pad is an automatically saved Preset. Last Set is the last thing coming out of the fixture, this could be Warm White with the intensity changed from that of the Preset.
3	IR Enabled	No, Yes	Yes	Turns IR/Laser detection On/Off
3	Reset Hours	No, Yes	No	Resets luminaire's operational hours.

Presets

3	Protected	No, 5 - 25	Yes	Determines if the factory Calibrated Presets' Color Mix is protected from changes.
3	Load Factory	No, Yes	No	Reload Factory Calibrated Presets, Intensity changes will also be reloaded.

DMX

3	DMX Enabled	No, Yes, or Wireless (if equipped)	Yes	Enables or disabled DMX communication through the luminaires DMX512 ports. Sets the DMX feature to Wireless DMX (if wireless DMX option is installed - sold separately).
1	Address	001 to 512	001	DMX512 address. Note, it can be set if displayed.
2	Map	8-bit, 16-bit, or 3-Chan	16-bit	Defines size/precision of DMX map. Color Mixing/Intensity in 16-bit provides higher resolution for precision control. 3-Chan provides minimal channel usage.
2	When no DMX	Off, Hold, Hold 8hr *(8 hours)*, or Power-Up	Hold	If DMX is detected and then goes away, this defines what will happen to the output. At end of 8Hr hold Fixture goes to Power-Up setting.

Fan

3	Normal / Quiet	Normal or Quiet	Quiet	Normal - Normal Mode Provides higher cooling margin for thermally challenging applications. Recommended for full power (RGBW @ 100%) applications with large and numerous changes in power. Quiet - (Quiet Mode) Quite Mode is similar to Normal mode, but it controls fan tightly to reduce fan noise.
3	Max%	0 to 100%	100	Sets the maximum fan speed
3	Min%	0 to 100%	1	Sets the minimum fan speed

Display

3	Flip Display	No, Yes	No	Flips (inverts) Display and Keypad Arrows.

Note: To Exit the Settings screen, use the [ESC] key. [ESC] and [OK] can be used to cancel or save changes to an individual parameter. However, once a parameter has been accepted, by pressing [OK] that change cannot be undone/canceled by pressing the [ESC] key.

DMX CONTROL

This section contains information for operating the luminaire using DMX control in 16-Bit, 8-Bit, or 3-Channel (3-Chan) modes. For Menu options and detailed information, see "Settings" on page 16.

Note: These tables assume a DMX start address of 1. When a different starting address is used, this address becomes channel 1 function and other functions follow in sequence.

1.   16-Bit Mode

Table 3 provides DMX channel mapping of all DMX512 control values when the PL1 LED Luminaire is in 16-bit DMX512 mode (as set by the luminaire's menu system).

Table 3: PL1 LED Luminaire DMX Channel Mapping (16-Bit Mode)

DMX Channel	Parameter	Range DMX	Range%	Default - *recommended console default values*	Description
1	Intensity - High	0 - 65535	0 - 100%	0	16-bit control for Intensity of LED settings.
2	Intensity - Low				
3	Red - High Byte	0 - 65535	0 - 100%	0	16-bit control of Red LEDs from 0 to full.
4	Red - Low Byte				
5	Green - High Byte	0 - 65535	0 - 100%	0	16-bit control of Green LEDs from 0 to full.
6	Green - Low Byte				
7	Blue - High Byte	0 - 65535	0 - 100%	0	16-bit control of Blue LEDs from 0 to full.
8	Blue - Low Byte				
9	White - High Byte	0 - 65535	0 - 100%	0	16-bit control of White LEDs from 0 to full.
10	White - Low Byte				
11	Preset Color Selection	0 - 255	0 - 100%	0	Used to access presets stored in fixture firmware, such as CCT presets, defined gel presets, etc. No Preset Activated = DMX 0-3 (DEFAULT) Color Preset 0 (Off) = DMX 4 - 7 Color Preset 1 (Scratch Pad) = DMX 8 - 11 Color Preset 2 (Warm White) = DMX 12 - 15 Color Preset 3 (Cool White) = DMX 16 - 19 Color Preset 4 (Daylight) = DMX 20 - 23 Color Preset 5 (Arc White) = DMX 24 - 27 Color Preset 6 (Red) = DMX 28 - 31 Color Preset 7 (Yellow) = DMX 32 - 35 Color Preset 8 (Daylight Blue) = DMX 36 - 39 Color Preset 9 (Magenta) = DMX 40 - 43 Color Preset 10 (Aqua) = DMX 44 - 47 Color Preset 11 (Medium Amber) = DMX 48 - 51 Color Preset 12 (Lavender) = DMX 52 - 55 Color Preset 13 (Blue) = DMX 56 - 59 Color Preset 14 (Light Pink) = DMX 60 - 63 Color Preset 15 (Green) = DMX 64 -67 Color Preset 16 (Pink) = DMX 68 - 71 Color Preset 17 (Amber White) = DMX 72 - 75 Color Preset 18 (Dark Fuchsia) = DMX 76 - 79 Color Preset 19 (Light Amber) = DMX 80 - 83 Color Preset 20 (Steel Blue) = DMX 84 - 87 Color Preset 21 (Lt. Green/Blue) = DMX 88 - 91 Color Preset 22 (Orange) = DMX 92 - 95 Color Preset 23 (Medium Pink) = DMX 96 - 99 Color Preset 24 (Cyan) = DMX 100 - 103 Color Preset 25 (Purple) = DMX 104 - 107 Color Preset 26 (Custom) = DMX 108 - 111 Color Preset 27 (Custom) = DMX 112 - 115 Color Preset 28 (Custom) = DMX 116 - 119 Color Preset 29 (Custom) = DMX 120 - 123 Color Preset 30 (Custom) = DMX 124 - 127 Color Preset 31 (Custom) = DMX 128 - 131
12	*Not used (for future use)*				

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Table 3: PL1 LED Luminaire DMX Channel Mapping (16-Bit Mode)

13	Intensity Time	0 - 255	0 - 100%	255	Allows for luminaire timing of intensity. Profile should default to DMX 255 for smoothest console fade times. Refer to "PL1 Luminaire DMX Timing Channel Detail" on page 23 for more information on timing values.
14	Color Time	0 - 255	0 - 100%	255	Allows for luminaire timing of LEDs. Profile should default to DMX 255 for smoothest console fade times.Refer to "PL1 Luminaire DMX Timing Channel Detail" on page 23 for more information on timing values.
15	Control	0 - 255	0 - 100%	0	Used to set different modes, parameters, and functions of the luminaire. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling. Default Setting on Console = DMX 0 Display On/Off = DMX 3 - 4 Reset All to Defaults = DMX 5 - 7 Quiet Mode = DMX 11 - 13 Normal Mode = DMX 14 - 15 Preset 1 Store = DMX 20 - 21 Preset 2 Store (Intensity Only) = DMX 22 - 23 Preset 3 Store (Intensity Only) = DMX 24 - 25 Preset 4 Store (Intensity Only) = DMX 26 - 27 Preset 5 Store = DMX 28 - 29 Preset 6 Store = DMX 30 - 31 Preset 7 Store = DMX 32 - 33 Preset 8 Store = DMX 34 - 35 Preset 9 Store = DMX 36 - 37 Preset 10 Store = DMX 38 - 39 Preset 11 Store = DMX 40 - 41 Preset 12 Store = DMX 42 - 43 Preset 13 Store = DMX 44 - 45 Preset 14 Store = DMX 46 - 47 Preset 15 Store = DMX 48 - 49 Preset 16 Store = DMX 50 - 51 Preset 17 Store = DMX 52 - 53 Preset 18 Store = DMX 54 - 55 Preset 19 Store = DMX 56 - 57 Preset 20 Store = DMX 58 - 59 Preset 21 Store = DMX 60 - 61 Preset 22 Store = DMX 62 - 63 Preset 23 Store = DMX 64 - 65 Preset 24 Store = DMX 66 - 67 Preset 25 Store = DMX 68 - 69 Preset 26 Store = DMX 70 - 71 Preset 27 Store = DMX 72 - 73 Preset 28 Store = DMX 74 - 75 Preset 29 Store = DMX 76 - 77 Preset 30 Store = DMX 78 - 79 Preset 31 Store = DMX 80 - 81 Fixture Reset* = DMX 250 - 255

2.   8-Bit Mode

Table 2-1 provides DMX channel mapping of all DMX512 control values when the PL1 LED Luminaire is in 8-bit DMX512 mode (as set by the luminaire's menu system).

Table 2-1: PL1 LED Luminaire DMX Channel Mapping (8-Bit Mode)

DMX Channel	Parameter	Range DMX	Range%	Default - *recommended console default values*	Description
1	Intensity	0 - 255	0 - 100%	0	8-bit control for Intensity of LED settings.
2	Red	0 - 255	0 - 100%	0	8-bit control of Red LEDs from 0 to full.
3	Green	0 - 255	0 - 100%	0	8-bit control of Green LEDs from 0 to full.
4	Blue	0 - 255	0 - 100%	0	8-bit control of Blue LEDs from 0 to full.
5	White	0 - 255	0 - 100%	0	8-bit control of White LEDs from 0 to full.
6	Preset Color Selection	0 - 255	0 - 100%	0	Used to access presets stored in fixture firmware, such as CCT presets, defined gel presets, etc. No Preset Activated = DMX 0-3 Color Preset 0 (Off) = DMX 4 - 7 Color Preset 1 (Scratch Pad) = DMX 8 - 11 Color Preset 2 (Warm White) = DMX 12 - 15 Color Preset 3 (Cool White) = DMX 16 - 19 Color Preset 4 (Daylight) = DMX 20 - 23 Color Preset 5 (Arc White) = DMX 24 - 27 Color Preset 6 (Red) = DMX 28 - 31 Color Preset 7 (Yellow) = DMX 32 - 35 Color Preset 8 (Daylight Blue) = DMX 36 - 39 Color Preset 9 (Magenta) = DMX 40 - 43 Color Preset 10 (Aqua) = DMX 44 - 47 Color Preset 11 (Medium Amber) = DMX 48 - 51 Color Preset 12 (Lavender) = DMX 52 - 55 Color Preset 13 (Blue) = DMX 56 - 59 Color Preset 14 (Light Pink) = DMX 60 - 63 Color Preset 15 (Green) = DMX 64 -67 Color Preset 16 (Pink) = DMX 68 - 71 Color Preset 17 (Amber White) = DMX 72 - 75 Color Preset 18 (Dark Fuchsia) = DMX 76 - 79 Color Preset 19 (Light Amber) = DMX 80 - 83 Color Preset 20 (Steel Blue) = DMX 84 - 87 Color Preset 21 (Lt. Green/Blue) = DMX 88 - 91 Color Preset 22 (Orange) = DMX 92 - 95 Color Preset 23 (Medium Pink) = DMX 96 - 99 Color Preset 24 (Cyan) = DMX 100 - 103 Color Preset 25 (Purple) = DMX 104 - 107 Color Preset 26 (Custom) = DMX 108 - 111 Color Preset 27 (Custom) = DMX 112 - 115 Color Preset 28 (Custom) = DMX 116 - 119 Color Preset 29 (Custom) = DMX 120 - 123 Color Preset 30 (Custom) = DMX 124 - 127 Color Preset 31 (Custom) = DMX 128 - 131
7	*Not used (for future use)*				
8	Timing	0 - 255	0 - 100%	255	Allows for timing control of both the intensity and color parameters. Channel should default to 255 for smoothest actions using console and/or manual fades. Refer to "PL1 Luminaire DMX Timing Channel Detail" on page 23 for more information.

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Table 2-1: PL1 LED Luminaire DMX Channel Mapping (8-Bit Mode)

9	Control	0 - 255	0 - 100%	0	Used to set different modes, parameters, and functions of the luminaire. Set control channel value for desired action. Hold value for at least 3 seconds. Set control channel value to 0 without any scaling. Default Setting on Console = DMX 0 Display On/Off = DMX 3 - 4 Reset All to Defaults = DMX 5 - 7 Quiet Mode = DMX 11 - 13 Normal Mode = DMX 14 - 15 Preset 1 Store = DMX 20 - 21 Preset 2 Store (Intensity Only) = DMX 22 - 23 Preset 3 Store (Intensity Only) = DMX 24 - 25 Preset 4 Store (Intensity Only) = DMX 26 - 27 Preset 5 Store = DMX 28 - 29 Preset 6 Store = DMX 30 - 31 Preset 7 Store = DMX 32 - 33 Preset 8 Store = DMX 34 - 35 Preset 9 Store = DMX 36 - 37 Preset 10 Store = DMX 38 - 39 Preset 11 Store = DMX 40 - 41 Preset 12 Store = DMX 42 - 43 Preset 13 Store = DMX 44 - 45 Preset 14 Store = DMX 46 - 47 Preset 15 Store = DMX 48 - 49 Preset 16 Store = DMX 50 - 51 Preset 17 Store = DMX 52 - 53 Preset 18 Store = DMX 54 - 55 Preset 19 Store = DMX 56 - 57 Preset 20 Store = DMX 58 - 59 Preset 21 Store = DMX 60 - 61 Preset 22 Store = DMX 62 - 63 Preset 23 Store = DMX 64 - 65 Preset 24 Store = DMX 66 - 67 Preset 25 Store = DMX 68 - 69 Preset 26 Store = DMX 70 - 71 Preset 27 Store = DMX 72 - 73 Preset 28 Store = DMX 74 - 75 Preset 29 Store = DMX 76 - 77 Preset 30 Store = DMX 78 - 79 Preset 31 Store = DMX 80 - 81 Fixture Reset* = DMX 250 - 255

3. DMX 3-Channel (3-Chan) Mode

Table 2-2 provides DMX channel mapping of all DMX512 control values when the PL1 LED Luminaire is in 3-Channel (3-Chan) DMX512 mode (as set by the luminaire's menu system).

Table 2-2: PL1 LED Luminaire DMX Channel Mapping (3-Chan Mode)

DMX Channel	Parameter	Range DMX	Range%	Default - *recommended console default values*	Description
1	Intensity	0 - 255	0 - 100%	0	8-bit control for Intensity of LED settings.
2	Preset Color Selection *Notes:* • Color Presets 5 through 25 are calibrated factory colors and can be reloaded if needed through the fixture's menu system. • These colors have been matched to precise X and Y coordinates at the center of the beam at wide angle, we have given you the ability to adjust these colors as your personal perception may vary.	0 - 255	0 - 100%	0	Used to access presets stored in fixture firmware, such as CCT presets, defined gel presets, and more. No Preset Activated = DMX 0 - 3 Color Preset 0 (Off) = DMX 4 - 7 Color Preset 1 (Scratch Pad) = DMX 8 - 11 Color Preset 2 (Warm White) = DMX 12 - 15 Color Preset 3 (Cool White) = DMX 16 - 19 Color Preset 4 (Daylight) = DMX 20 - 23 Color Preset 5 (Arc White) = DMX 24 - 27 Color Preset 6 (Red) = DMX 28 - 31 Color Preset 7 (Yellow) = DMX 32 - 35 Color Preset 8 (Daylight Blue) = DMX 36 - 39 Color Preset 9 (Magenta) = DMX 40 - 43 Color Preset 10 (Kelly Green) = DMX 44 - 47 Color Preset 11 (Medium Amber) = DMX 48 - 51 Color Preset 12 (Lavender) = DMX 52 - 55 Color Preset 13 (Blue) = DMX 56 - 59 Color Preset 14 (Light Pink) = DMX 60 - 63 Color Preset 15 (Green) = DMX 64 - 67 Color Preset 16 (Pink) = DMX 68 - 71 Color Preset 17 (Amber White) = DMX 72 - 75 Color Preset 18 (Dark Fuchsia) = DMX 76 - 79 Color Preset 19 (Light Amber) = DMX 80 - 83 Color Preset 20 (Steel Blue) = DMX 84 - 87 Color Preset 21 (Lt. Green/Blue) = DMX 88 - 91 Color Preset 22 (Orange) = DMX 92 - 95 Color Preset 23 (Medium Pink) = DMX 96 - 99 Color Preset 24 (Cyan) = DMX 100 - 103 Color Preset 25 (Purple) = DMX 104 - 107 Color Preset 26 (Custom) = DMX 108 - 111 Color Preset 27 (Custom) = DMX 112 -115 Color Preset 28 (Custom) = DMX 116 - 119 Color Preset 29 (Custom) = DMX 120 - 123 Color Preset 30 (Custom) = DMX 124 - 127 Color Preset 31 (Custom) = DMX 128 - 131
3	Timing	0 - 255	0 - 100%	255	Allows for timing control of both the intensity and color parameters. Channel should default to 255 for smoothest actions using console and/or manual fades. Refer to "PL1 Luminaire DMX Timing Channel Detail" on page 23 for more information.

4. Lighting Console Settings for Preset White

16-Bit Mode

Below are the DMX512 console values and levels* for Warm White, Cool White, and Day Light presets in 16-bit mode.

White Preset	Red Channel		Green Channel		Blue Channel		White Channel	
	DMX Value	DMX%	DMX Value	DMX%	DMX Value	DMX%	DMX Value	DMX%
Warm White	65535	100	36700	56	0	0	47185	72
Cool White	65535	100	41287	63	8520	13	61603	94
Day Light	65535	100	53739	82	26214	40	58982	90

8-Bit Mode

Below are the DMX512 console values and levels* for Warm White, Cool White, and Day Light presets in 8-bit mode.

White Preset	Red Channel		Green Channel		Blue Channel		White Channel	
	DMX Value	DMX%	DMX Value	DMX%	DMX Value	DMX%	DMX Value	DMX%
Warm White (3200K)	255	100	163	64	0	0	217	85
Cool White (4000K)	255	100	194	76	46	18	255	100
Day Light (5600K)	255	100	237	93	130	51	255	100

Note: *Values and levels shown for Preset White (in both 16 and 8-bit modes) are approximate. Due to the characteristics of LED technology, actual values may vary slightly between fixtures.

5. PL1 Luminaire DMX Timing Channel Detail

Timing channel control improves the timed moves of certain groups of parameters. The PL1 LED Luminaire provides two timing channels in 16-bit mode (one for intensity time and one for color time) and one timing channel in 8-bit (color and intensity timing combined). The luminaire uses its timing channel value to calculate a smooth continuous operation for a given time and transition.

Guidelines:

• Timing channels support time values from zero to 169 seconds.

• To use a timing channel instead of console timing, it is recommended to set the timing channel to the desired value and set cue and/or console cue fade time to zero. A combination of time controls can produce unexpected results.

• The default value setting in the profile should be 255 (proportional control) to allow smooth operation when using console timing.

• The timing channel data should change as a snap. A zero value will give the fastest operation, however, without any smoothing this can appear "steppy" in console timed moves.

Refer to for more information.

Table 3: PL1 Luminaire Timing Channel Detail

% Value	DMX	= Seconds
	0	0 (Full Speed)
	1	0.2
	2	0.4
1	3	0.6
	4	0.8
2	5	1
	6	1.2
	7	1.4
3	8	1.6
	9	1.8
4	10	2
	11	2.2
	12	2.4
5	13	2.6
	14	2.8
6	15	3
	16	3.2
	17	3.4
7	18	3.6
	19	3.8
8	20	4
	21	4.2
	22	4.4
9	23	4.6
	24	4.8
10	25	5
	26	5.2
	27	5.4
11	28	5.6
	29	5.8
	30	6
12	31	6.2
	32	6.4
13	33	6.6
	34	6.8
	35	7.0
14	36	7.2
	37	7.4
15	38	7.6
	39	7.8
	40	8
16	41	8.2
	42	8.4
17	43	8.6
	44	8.8
	45	9
18	46	9.2
	47	9.4
19	48	9.6
	49	9.8
	50	10
20	51	10.2

% Value	DMX	= Seconds
	52	10.4
	53	10.6
21	54	10.8
	55	11
22	56	11.2
	57	11.4
	58	11.6
23	59	11.8
	60	12
24	61	12.2
	62	12.4
	63	12.6
25	64	12.8
	65	13
26	66	13.2
	67	13.4
	68	13.6
27	69	13.8
	70	14
28	71	14.2
	72	14.4
	73	14.6
29	74	14.8
	75	15
30	76	15.2
	77	15.4
	78	15.6
31	79	15.8
	80	16
	81	16.2
32	82	16.4
	83	16.6
33	84	16.8
	85	17
	86	17.2
34	87	17.4
	88	17.6
35	89	17.8
	90	18
	91	18.2
36	92	18.4
	93	18.6
37	94	18.8
	95	19
	96	19.2
38	97	19.4
	98	19.6
39	99	19.8
	100	20
	101	21
40	102	22
	103	23
	104	24
41	105	25

% Value	DMX	= Seconds
	106	26
42	107	27
	108	28
	109	29
43	110	30
	111	31
44	112	32
	113	33
	114	34
45	115	35
	116	36
46	117	37
	118	38
	119	39
47	120	40
	121	41
48	122	42
	123	43
	124	44
49	125	45
	126	46
	127	47
50	128	48
	129	49
51	130	50
	131	51
	132	52
52	133	53
	134	54
53	135	55
	136	56
	137	57
54	138	58
	139	59
55	140	60
	141	61
	142	62
56	143	63
	144	64
57	145	65
	146	66
	147	67
58	148	68
	149	69
59	150	70
	151	71
	152	72
60	153	73
	154	74
	155	75
61	156	76
	157	77
62	158	78
	159	79

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% Value	DMX	= Seconds
	160	80
63	161	81
	162	82
64	163	83
	164	84
	165	85
65	166	86
	167	87
66	168	88
	169	89
	170	90
67	171	91
	172	92
68	173	93
	174	94
	175	95
69	176	96
	177	97
	178	98
70	179	99
	180	100
71	181	101
	182	102
	183	103
72	184	104
	185	105
73	186	106
	187	107
	188	108
74	189	109
	190	110
75	191	111
	192	112
	193	113
76	194	114
	195	115
77	196	116
	197	117
	198	118
78	199	119
	200	120
79	201	121
	202	122
	203	123
80	204	124
	205	125
81	206	126
	207	127
	208	128
82	209	129
	210	130
	211	131
83	212	132
	213	133

% Value	DMX	= Seconds
84	214	134
	215	135
	216	136
85	217	137
	218	138
86	219	139
	220	140
	221	141
87	222	142
	223	143
88	224	144
	225	145
	226	146
89	227	147
	228	148
	229	149
90	230	150
	231	151
91	232	152
	233	153
	234	154
92	235	155
	236	156
93	237	157
	238	158
	239	159
94	240	160
	241	161
95	242	162
	243	163
	244	164
96	245	165
	246	166
97	247	167
	248	168
	249	169
98	250*	60mS
	251*	80mS
99	252*	100mS
	253*	120mS
	254*	140mS
100	255* (default)	160mS

Note: * DMX values 250 to 255 provide smoothing when using console fade timing. DMX value 255 (recommended default) will provide the smoothest timing.

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INFRARED REMOTE CONTROL

1.   Infrared Remote Control Overview

The PL1IRR infrared preset programming remote (sold separately) allows users convenient access to adjust and program luminaire parameters - presets (1 through 6 and Off), intensity, preset color temperatures, or full color mixing from the floor. Before using the remote, please familiarize yourself with all available controls shown in **Figure 3**.

Infrared Remote Control Features

Program -

Enter - After the luminaire to be programmed is selected (by Laser), press Enter to set the luminaire to programming mode.

Laser (Luminaire Selector) - Press Laser to select individual luminaire for programming / adjustment.

Exit - Press to exit programming mode.

Cancel -

Cancels the learn features (any programming made will not be recorded) RGBW will not be changed.

Learn -

After adjustments are made, the Learn button (in conjunction with a preset button) stores the new settings to a specific preset if desired.

Preset (White Color Temperature) -

Allows selection of Warm, Cool or Day color temperatures.

Note, only intensities may be stored on White Color Temperature presets. These presets cannot be edited or changed

Laser / IR Window -

Laser and IR programming emits from this end.

PL1IRR LED (indicator) -

The LED indicator will flash each time a button is pressed.

Intensity Raise/Lower -

Press top button to raise intensity and bottom button to lower it. Tap the up for 2% increase or tap down for a 1% decrease. Press and hold (top or bottom button) for sequential raise/lower.

Individual LED Color Adjustment -

Allows the raising or lowering of individual LED colors. Press top button to change color and bottom button to lower it. Tap the up for 2% increase or tap down for a 1% decrease. Press and hold (top or bottom button) for sequential raise/lower.

Presets (6 Levels or Off) -

Allows selection and programming of one of six Presets (1 through 6) or Preset Off.

Notes:
- Preset Off cannot be edited or changed.
- Presets 1 through 6 on remote control (equate to) Presets 5 through 10 on PL1 LED luminaire display.
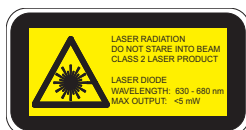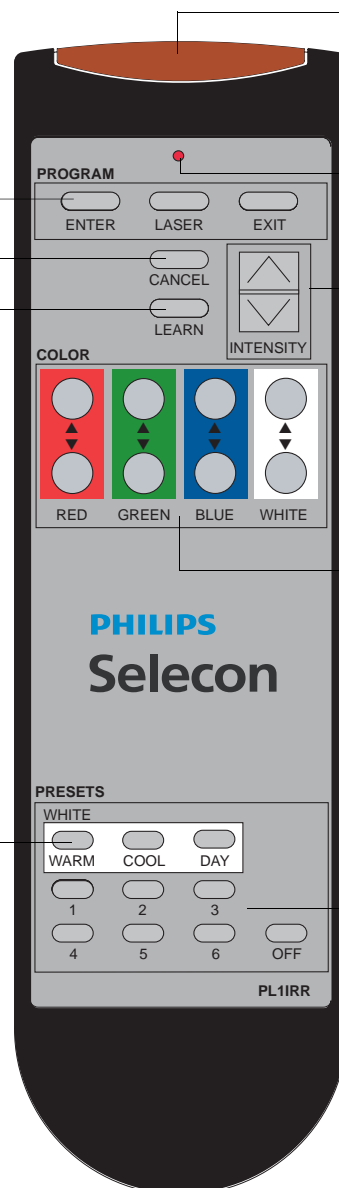
WARNING! THIS DEVICE IS A CLASS 2 LASER. DO NOT STARE OR LOOK DIRECTLY INTO BEAM.

Figure 3: PL1IRR Programming Remote

To select and program PL1 LED luminaire with PL1IRR remote:

Note: The IR, on the PL1 LED luminaire, must be set to "Enabled" in order for the PL1IRR remote to communicate and control the fixture. Refer to PL1 LED Luminaire Installation & User's Manual on luminaire menu settings.

Step 1. Point PL1IRR programming remote Laser / IR window directly at luminaire IR programming window (as shown in **Figure 4**) and hit "Enter" button. Note, each luminaire to be programmed/adjusted needs to be selected and programmed/adjusted individually.
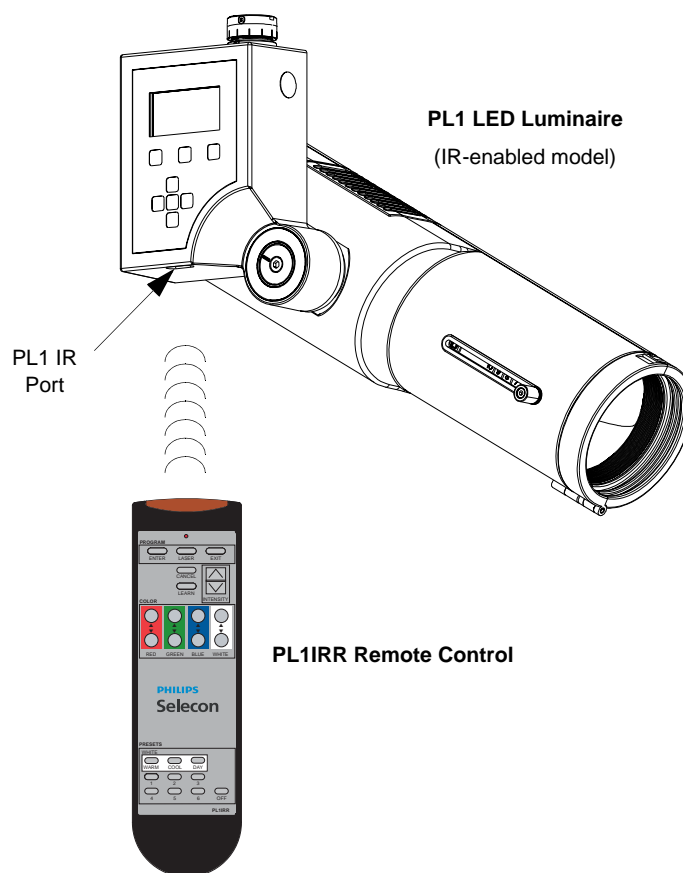
Figure 4: PL1 LED Luminaire Programming / Control

Step 2. Point PL1IRR remote directly at luminaire IR window and hit "Laser" button. Luminaire to be programmed or adjusted is now selected.

Note: *At luminaire IR port, a Blue LED will illuminate when the fixture is in programming mode and blink Red when buttons are pressed on IR remote to confirm it sees the remote and is receiving commands.*

Step 3. Set luminaire to preset or make adjustments as desired.

Step 4. To save settings, hit "Learn" button and then hit any Preset button (except Off - Off cannot be programmed). Preset is now saved. To cancel programming, hit "Cancel" button.

Step 5. After programming or adjustments are complete, hit "Exit" button. Repeat, as desired, on additional luminaires to be programmed/adjusted.

Note: Refer to PL1IRR Remote Control User's Manual for additional information. This manual is available on the Philips Selecon web site at www.seleconlight.com.

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CLEANING AND CARE

> **WARNING!** All cleaning should be performed with power completely removed from the luminaire. Never remove protective covers when luminaire is powered. Wear appropriate protective eye wear and gloves when cleaning the fixture. All service and maintenance, other than described herein, should be performed by a qualified technician or Authorized Service Center.

1. Special Cleaning and Care Instructions

Being a solid-state fixture, and unlike most fixtures, the PL1 LED Luminaire requires very little routine maintenance by the user. This section covers portions of the luminaire that can be removed for cleaning.

The PL1 Luminaire requires special care when it comes to cleaning front lens assembly. Additional care needs to be taken with the plastic components because they are much easier to scratch or damage than glass.

The following is a list of cleaning materials required to care for your PL1 LED Luminaire:

- Lint free lens tissue
- Lint or powder free gloves
- Reagent grade isopropyl alcohol*
- A mild soap solution.

> **Note:** *Reagent grade isopropyl alcohol is good to use on the PL1 LED Luminaire plastic optics with anti-reflection coatings.

If the lens is still dirty after using isopropyl alcohol, for instance if fingerprints or oil is just redistributed and not cleaned off the optic, then a mild soap and water solution can be used to gently wash the lens. Repeat the cleaning with isopropyl alcohol to eliminate streaks and soap residue.

> **WARNING!** Under no circumstances should ammonia-based cleaners, acetone, or other harsh solvents be used on or near the PL1 LED Luminaire. These types of cleaners or solvents can permanently damage the optics or housings of the fixture.

If you have any questions regarding the use or care of your PL1 LED Luminaire, please contact Philips Selecon technical support or your local Authorized Dealer.

2. Lens Cleaning

Front Lens (Exterior)

To clean the exterior front lens:

Step 1. Turn off luminaire and allow to cool completely.

Step 2. Apply a small amount of reagent grade isopropyl alcohol to lint-free lens tissue.

Step 3. Wipe all debris, dirt, fingerprints, etc. from lens.

Step 4. Using a second lint-free lens tissue, wipe off any alcohol residue.

Front Lens (Interior)

To clean the interior of front lens:

Step 1. Turn off luminaire and allow to cool completely.

Step 2. Place luminaire on a flat, clean surface. Be careful not to scratch or damage luminaire.

> **Note:** A long 3 mm Allen hex key is required to perform this procedure.

Step 3. Before opening luminaire head cover, note position of lens focus/zoom knob position (to reset focus/zoom position after completion of procedure).

Step 4. At luminaire head cover (as shown in **Figure 5**), using 3 mm Allen hex key, completely loosen three captive screws securing cover.
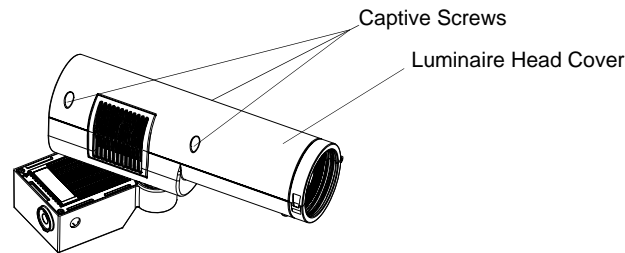
Figure 5: PL1 LED Luminaire Head Cover

Step 5. Swing open luminaire head cover.

Step 6. As illustrated in **Figure 6**, unscrew locking focus/zoom knob by hand and remove. Be sure not to lose washer or spring (that resides inside of knob).

Step 7. Noting orientation of lens tube, remove lens tube assembly from luminaire head.

Step 8. Clean interior side of front lens by applying a small amount of reagent grade isopropyl alcohol to lint-free lens tissue.

Step 9. Wipe all debris, dirt, fingerprints, etc. from lens.

Step 10. Using a second lint-free lens tissue, wipe off any alcohol residue.

Step 11. Clean Aspheric LED Lens as described in Steps 8 through 10.
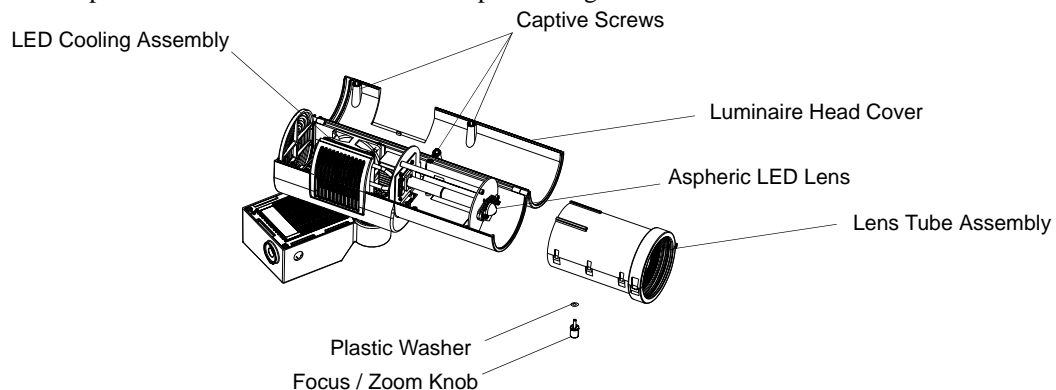
Figure 6: PL1 LED Luminaire Lens Tube Assembly

> **Note:** Remove any dust or debris that may be present in rear of luminaire head (next to LED Cooling Assembly). If required, use moisture and oil-free, compressed air duster. DO NOT blow compressed air directly into fan or debris may become lodged in LED cooling unit fins.

Step 12. Reinstall lens tube by perform Steps 3 to 6 in reverse order.

3. Service and Maintenance

For all other service and maintenance issues, please contact your local Philips Selecon office or an Authorized Service Center.

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> ⚡ **WARNING!** Disassembly (other than as described herein), alterations, unauthorized service, etc. will void the product warranty. Contact your local Philips Selecon office or an Authorized Service Center for technical support and service.

4.   Accessories

Only Philips Selecon approved accessories should be used with your PL1 LED Luminaire. For a list of available accessories from Philips Selecon, please see "ACCESSORIES" on page 4. For questions regarding accessories, please contact your local Authorized Philips Selecon Dealer or Philips Selecon office.
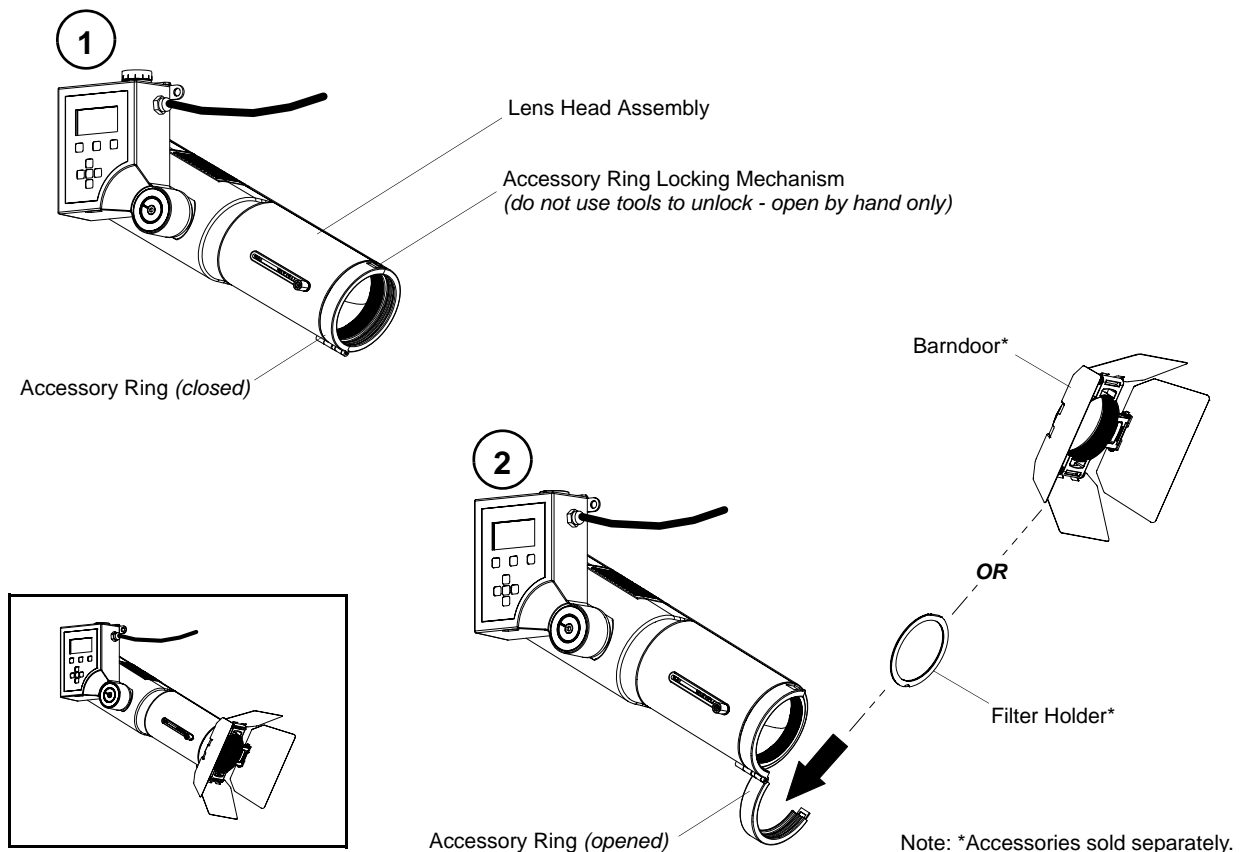
To install diffuser or barndoor on a PL1 LED luminaire:

Step 1. Lower intensity of PL1 luminaire to no output.

> ⚠ **WARNING!** Using a prying device (such as a screwdriver) can damage locking mechanism. It is designed to be unlatched by hand.

Step 2. At luminaire head assembly, as shown in **Figure 7**, open Accessory Ring holder by gently prying locking mechanism up with finger.

Figure 7: PL1 LED Accessory Installation

Step 3. Make sure accessory is positioned as desired (in correct slot in holder) and gently slide accessory into Accessory Ring holder.

Step 4. Swing Accessory Ring holder closed until it locks (snaps) into place.

Step 5. The luminaire is ready for use.

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TROUBLESHOOTING

1. Troubleshooting Guide

The chart below provides possible causes and remedies for various error messages and/or symptoms.

⚠️ **WARNING!** Any service and maintenance (including troubleshooting), other than described herein should be performed by an Authorized Philips Selecon Dealer or Service Center.

| Description	Symptom	Possible Cause/Remedy
No light output.	Fixture will not produce or output light	Unit is set to Preset Off... Make sure unit is set to proper Preset. DMX command to 0 intensity... Adjust intensity to higher level.
No power at luminaire.	Luminaire does not power up	Circuit not energized... verify circuit breaker is turned on. Not plugged in... ensure A/C cable is connected to power source. Power cable wired incorrectly... verify power cable and connector are wired correctly. See "Connecting Power" on page 6 for more information.
DMX Data Control.	Fixture will not respond to DMX commands.	Not detecting DMX data... Disconnect and reconnect DMX input cable. Unit is not set to be controlled by DMX - check menu settings. Check all DMX connections (at control source and luminaire). DMX data cable not wired correctly or has a broken conductor... check DMX data cable for proper wiring. See "Connecting to the DMX512 Network" on page 6 for more information.
IR remote programming.	Fixture will not respond to IR remote programming unit.	Luminaire not selected by laser... Reselect luminaire by repeating luminaire selection step. Not seeing IR remote control... Make sure batteries are good in remote. Try fresh, fully charged batteries. Make sure IR is enabled in the fixture menu. Insure IR remote is pointing at IR window in luminaire and that there is nothing in between IR remote and luminaire IR window. Clean luminaire IR window.
LED (light) is getting dimmer.	Fixture appears not to be operating at full brightness.	Luminaire has detected an over temperature condition... The luminaire will reduce power to its LED if it senses that the LED is operating over the specified temperature. LED temperature is read and recorded through a thermistor imbedded in the LED chip. Fan is not operating. Listen for fan operation or adjust settings to increase fan speed. On luminaires with a display check system status menu for status of fans and LED operation.
Local programming.	Unit will not allow local programming or changes.	Password protection is on (locked)... Input proper password to allow local programming and/or adjustments. Unit is controlled by DMX... Disconnect input cables to check issue.

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TECHNICAL SPECIFICATIONS

1.   PL1 LED Luminaire Common Specifications

Source:	True RGBW 120 Watt LED chip
Beam Spread:	14 to 50+ degrees
Light Output:	> 2,000 lumens
Color Temperature:	3000 - 5600K (user adjustable)
Input Voltage:	120V to 240V (+/- 10%, auto-ranging)
Current:	1.91 Amps (90V) / 0.72 Amps (240V)
Frequency:	50/60Hz
Ambient Temperature:	0 to 40 degrees C (32 to 104 degrees F)
Humidity:	5%-95% Non condensing
Cooling:	Forced-Air
Weight:	8.0 lbs (3.6 kg) - Luminaire only (no mount, AC input cable or accessories)
Compliance:	ETL / cETL Listed (North America models) and CE Marked (International models)

Note: Common model specifications shown. For specific model specifications, features, and accessories, refer to the product specification sheet or visit the Philips Selecon web site at www.seleconlight.com for more details.

2.   PL1 LED Luminaire Dimensions
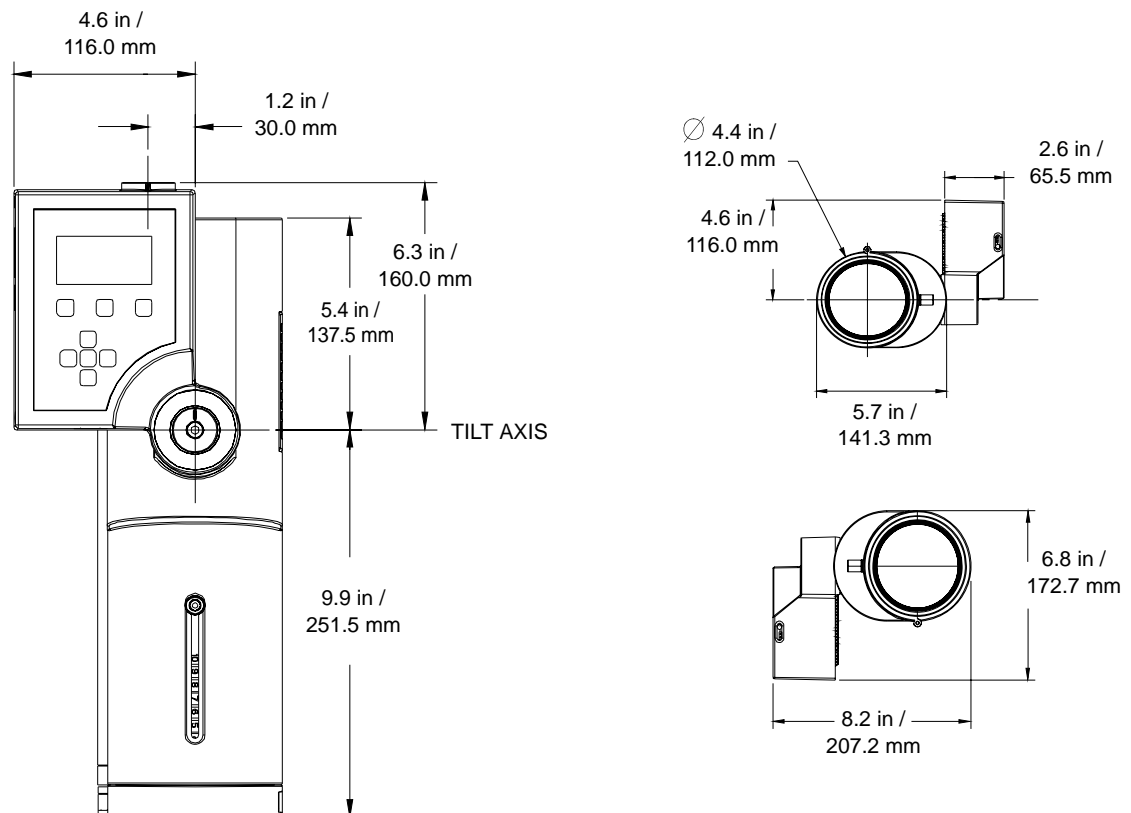
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